FORM PTO-1390 (Modified) (REV 11-98) U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371

ATTORNEY'S DOCKET NUMBER	U.S. APPLICATION NO. (IF KNOWN, SEE 37 CFR)
SWA-001-US	09/830475

INTERNATIONAL APPLICATION NO.	INTERNATIONAL FILING DATE	PRIORITY DATE CLAIMED
PCT/CA99/01014	29 OCTOBER 1999	30 OCTOBER 1998

TITLE OF INVENTION

DIGITAL NETWORK MODEM WITH AN INTEGRATED DHCP SERVER

APPLICANT(S) FOR DO/EO/US

MOINEAU, Gilbert

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).
4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.
5. ☒ A copy of the International Application as filed (35 U.S.C. 371 (c) (2))
   a. ☐ is transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☒ has been transmitted by the International Bureau.
   c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ A translation of the International Application into English (35 U.S.C. 371(c)(2)).
7. ☒ A copy of the International Search Report (PCT/ISA/210).
8. ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371 (c)(3))
   a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).
   b. ☐ have been transmitted by the International Bureau.
   c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
   d. ☐ have not been made and will not be made.
9. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
10. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371 (c)(4)).
11. ☒ A copy of the International Preliminary Examination Report (PCT/IPEA/409).
12. ☐ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).

Items 13 to 20 below concern document(s) or information included:

13. ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
14. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
15. ☐ A **FIRST** preliminary amendment.
16. ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
17. ☐ A substitute specification.
18. ☐ A change of power of attorney and/or address letter.
19. ☐ Certificate of Mailing by Express Mail
20. ☒ Other items or information:

Copy of the annexes to the IPER (four (4) sheets comprising two (2) substitute sheets of amended claims (Article 34) and two (2) substitute sheets of specification amendments (Article 34))

Copy of the International Application as published (WO 00/27094)

White Advance Serial Number Postcard

APPLICATION NO. (IF KNOWN, SEE 37 CFR)	INTERNATIONAL APPLICATION NO.	ATTORNEY'S DOCKET NUMBER
09/830475	PCT/CA99/01014	SWA-001-US

21. The following fees are submitted:.

BASIC NATIONAL FEE (37 CFR 1.492 (a) (1) - (5)) :

		CALCULATIONS PTO USE ONLY
☐	Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2) paid to USPTO and International Search Report not prepared by the EPO or JPO	$1,000.00
☒	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but Internation Search Report prepared by the EPO or JPO	$860.00
☐	International preliminary examination fee (37 CFR 1.482) not paid to USPTO but international search fee (37 CFR 1.445(a)(2)) paid to USPTO	$710.00
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) but all claims did not satisfy provisions of PCT Article 33(1)-(4)	$690.00
☐	International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(1)-(4)	$100.00

ENTER APPROPRIATE BASIC FEE AMOUNT =	**$860.00**	
Surcharge of **$130.00** for furnishing the oath or declaration later than ☐ 20 ☒ 30 months from the earliest claimed priority date (37 CFR 1.492 (e)).	**$130.00**	

CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	18 - 20 =	0	x $18.00	**$0.00**	
Independent claims	2 - 3 =	0	x $80.00	**$0.00**	
Multiple Dependent Claims **(check if applicable).**			☒	**$270.00**	
TOTAL OF ABOVE CALCULATIONS =				**$1,260.00**	
Reduction of 1/2 for filing by small entity, if applicable. Verified Small Entity Statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28) **(check if applicable).** ☐				**$0.00**	
SUBTOTAL =				**$1,260.00**	
Processing fee of **$130.00** for furnishing the English translation later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492 (f)). +				**$0.00**	
TOTAL NATIONAL FEE =				**$1,260.00**	
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31) **(check if applicable).** ☐				**$0.00**	
TOTAL FEES ENCLOSED =				**$1,260.00**	
				Amount to be: refunded	$
				charged	$

☒ A check in the amount of **$1,260.00** to cover the above fees is enclosed.

☐ Please charge my Deposit Account No. **50-1442** in the amount of to cover the above fees.
A duplicate copy of this sheet is enclosed.

☐ The Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. **50-1442** A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

SEND ALL CORRESPONDENCE TO:

Supervisor, Patent Prosecution Services
PIPER MARBURY RUDNICK & WOLFE, LLP
1200 Nineteenth Street, NW
Washington, DC 20036-2412
US

Laura D. Nammo
SIGNATURE

CHESSER, Wilburn L.; NAMMO, Laura D.
NAME

41,668; 42,024
REGISTRATION NUMBER

27 APRIL 2001
DATE

DIGITAL NETWORK MODEM WITH AN INTEGRATED DHCP SERVER

Field of the Invention

The present invention relates to a digital network modem, such as an ISDN or a DSL modem, and more particularly to a digital network modem having a dynamic host configuration protocol (DHCP) server function integrated into the modem.

Background of the Invention

To facilitate network management in local area networks (LANs), it is known to provide servers called dynamic host configuration protocol or DHCP servers. These servers respond to requests from clients connected to the network to receive assigned dynamic addresses for communication purposes on the network. The advantage of using such a dynamic address assignment is that new clients can be added easily, and the effort to manage the addresses used on the network is reduced. In most cases, a DHCP server is provided by software added to a network server.

When a network which was previously not connected to other networks or when a network needs a faster or additional connection to other networks, digital network modems are added to provide the desired connection. Network modems, such as ISDN modems, are assigned an address on the LAN. When DHCP is used, clients on the LAN are assigned their addresses and can recognize the modem as a router or gateway by consulting the DHCP, and in this way, each client does not need to have prior knowledge of any fixed address for the modem.

Computer networks are being installed in more and more residential, office and industrial environments, and the increase in the number of such networks has increased the need for skilled technicians required to configure and maintain

such networks. While computer networks were very uncommon a few years ago for home users, it is now economically feasible and desirable to interconnect computer devices in a home environment. Any simplification of the task of network management is important from the perspective of both increased reliability and reduced training for the network manager. DHCP therefore offers many practical advantages in managing a network, even for relatively small networks found in homes or small and medium businesses. While some network administrators have taken the time to obtain and install DHCP, many others have not, particularly in home and small business environments.

While it would be advantageous to provide a DHCP server function integrated with a component to be added to a network, such as a digital network modem, for those who would benefit from a DHCP, it is imperative to avoid installing two DHCP servers on the same network, since the result would be confusion and malfunction. Furthermore, having to choose between one modem including DHCP functionality and another modem without DHCP requires the manufacture, distribution and stocking of separate types of modems, and complicates the purchasing choice.

European Patent Application No. 0 843 440 to Danknick, Dan and entitled "Network Device Which Maintains A List Of Device Addresses" describes a method which controls a network device on a local area network to operate as a list manager which maintains a list of device addresses for the LAN. It detects if a list manager is operating on the LAN and if so, controls the device to operate as a slave. If not, the device becomes the list manager on the LAN for the various devices on the LAN.

Summary of the Invention

It is therefore an object of the invention to provide in a digital network modem (i.e. a router or gateway device) a mechanism for dynamically assigning network addresses on a LAN, such as DHCP, which mechanism has an auto-sense feature to automatically shut itself off when the modem detects that a similar device is present on the LAN.

According to the invention, there is provided a network modem device comprising an integrated mechanism for dynamically assigning network addresses on a network, the network modem device being characterized in that it

comprises: a controller circuit detecting a presence of a dynamic address assignment server on the network; an interrupter disabling the integrated mechanism when the controller circuit detects the server; and a memory store of unknown used addresses; wherein the integrated mechanism comprises: a start-up mechanism checking the availability of addresses on the network and placing used addresses in the memory store of unknown used addresses; an address manager selecting new addresses not included in the store of unknown used addresses, and removing addresses from the store of unknown used addresses when a client having one of the addresses in the store of unknown used addresses requests a dynamically assigned address.

The invention also provides a method of enabling/disabling a mechanism for dynamically assigning network addresses on a network, the mechanism being integrated into a network modem device, the method comprising: detecting a presence of a dynamic address assignment server on the network; and disabling the integrated mechanism when the server is detected; checking the availability of addresses on the network after power on and loss of memory of previously dynamically assigned addresses; storing the used addresses in a store of unknown used addresses; selecting new addresses not stored in response to a request for a dynamically assigned address; and removing an address from the store of unknown used addresses when a client having one of the addresses in the store of unknown used addresses requests a dynamically assigned address.

It is yet another object of the invention to provide a mechanism for dynamically assigning network addresses on a LAN, such as DHCP, which is able to handle a re-initialization, for example as a result of being turned off and on, without disrupting any clients on the network. According to this feature, the mechanism for dynamically assigning network addresses pings all addresses within its range at power on. The mechanism then reserves any addresses which have responded. New clients requesting dynamic addresses are assigned new addresses within the range, and existing clients request a new address periodically. When an existing client having one of the reserved addresses requests a new dynamic address, the address is removed from the list of unknown and reserved addresses.

Brief Description of the Drawings

The invention will be better understood by way of the following detailed description of a preferred embodiment with reference to the appended drawings, in which:

Fig. 1 is a schematic block diagram of the LAN ISDN modem according to the preferred embodiment connected to a LAN to which a configuration station and a network DHCP server are also connected.

Detailed Description of the Preferred Embodiment

As illustrated in Fig. 1, the digital modem 10 according to the preferred embodiment is an ISDN modem having a plurality of functional components shown in Fig. 1. The separation of components illustrated in the separate blocks in Fig. 1 is for the purposes of illustration only, and does not necessarily reflect the physical separation of components in the real device which is built from both hardware and software/firmware components.

When the modem 10 is connected to the Ethernet local area network (LAN) 22 and powered up, a LAN interface 12 and a modem address initializer unit 14 become active. In operation, the modem 10 directs data traffic via router 18 onto the selected ISDN channel 20. The initializer unit 14 broadcasts a DHCP discover message on LAN 22 to detect whether a Dynamic Host Configuration Protocol (DHCP) server 28 is present on the LAN 22. While it is essential to check for the existence of a server 28 at start-up, it is also preferred to check for the existence of such a server 28 periodically.

If a response is received from the server 28, initializer 14 sends a disable signal to the modem's own DHCP server 16. The modem will be assigned a static address, either by direct communication through console 15, or by remote

communication at configuration station 24 using the modem monitor program 26.

If no network DHCP server 28 is present on the LAN 22, then no response is received to the DHCP discover message sent by initializer 14. The DHCP server 16 is then not disabled, and it will be able to operate as a DHCP server on network 22. The modem 10 is assigned a static address, either by direct communication through console 15, or by remote communication at configuration station 24 using the modem monitor program 26. When modem 10 functions as a DHCP server, DHCP server 16 will reply to DHCP discover packets broadcasted by clients 30 and 32 (and possibly station 24) to configure their IP addresses. In the preferred embodiment, when the clients 30,32 are using dynamic addresses and the only DHCP server is 16, all the clients are configured by the modem's DHCP component 16 using addresses in the factory defined range of addresses: 192.168.1.2,....192.168.1.50

In the preferred embodiment, a client station 24 includes a modem monitor 26 which allows the user to manually set the active/inactive state of the DHCP server, in the event that the network manager wants to disable the DHCP server 16, or at a later time re-enable the DHCP server 16. The modem monitor interface is HTML-based and provides a simple interface.

Server 16 also handles a reinitialization, for example as a result of being turned off and on, without disrupting any clients on the network. Server 16 pings all addresses within its range at power on. Any addresses which have responded to the ping are placed on a reserved list 17 of unknown status addresses. These unknown addresses could be DHCP clients or static addresses. New clients requesting dynamic addresses are assigned new addresses within the range of the modem and which are not on the reserved list or list of other addresses

already assigned to DHCP clients since power on. Existing clients request a new address periodically, based on their lease time, which can vary from minutes to months. When an existing client having one of the reserved addresses requests a new dynamic address, the address is removed from the list of unknown and reserved addresses. This frees up the otherwise reserved address. As will be appreciated, a DHCP server would normally copy all address and lease time data to fixed storage and recover from a shut down by retrieving the data from fixed storage. According to the invention, the DHCP mechanism integrated into the modem does not require fixed storage, due to the use of its start-up check for addresses in-use and subsequent free-up of those addresses belonging to DHCP clients upon renewal.

CLAIMS

1. A network modem device comprising an integrated mechanism for dynamically assigning network addresses on a network, the network modem device being characterized in that it comprises:

a controller circuit detecting a presence of a dynamic address assignment server on the network;

an interrupter disabling said integrated mechanism when said controller circuit detects said server; and

a memory store of unknown used addresses;

wherein said integrated mechanism comprises

a start-up mechanism checking the availability of addresses on the network and placing used addresses in said memory store of unknown used addresses;

an address manager selecting new addresses not included in said store of unknown used addresses, and removing addresses from said store of unknown used addresses when a client having one of said addresses in said store of unknown used addresses requests a dynamically assigned address.

2. The device according to claim 1, wherein said network modem device is a digital network modem.

3. The device according to claim 2, wherein said network modem device is an ISDN modem.

4. The device according to one of claims 1 to 3, wherein said integrated mechanism provides a DHCP server function.

5. The device according to claim 4, wherein said controller circuit broadcasts a DHCP discover message on the network and listens to a response to detect said presence of said server.

6. A method of enabling/disabling a mechanism for dynamically assigning network addresses on a network, said mechanism being integrated into a network modem device, the method comprising:

detecting a presence of a dynamic address assignment server on the network; and

disabling said integrated mechanism when said server is detected;

checking the availability of addresses on the network after power on and loss of memory of previously dynamically assigned addresses;

storing the used addresses in a store of unknown used addresses;

selecting new addresses not stored in response to a request for a dynamically assigned address; and

removing an address from said store of unknown used addresses when a client having one of said addresses in said store of unknown used addresses requests a dynamically assigned address.

7. The method according to claim 6, wherein said device is a digital network modem.

8. The method according to claim 7, wherein said device is an ISDN modem.

9. The method according to one of claims 6 to 8, wherein said integrated mechanism provides a DHCP server function.

10. The method according to claim 9, wherein said detecting comprises broadcasting from said device onto said network a DHCP discover message and listening to a response to detect said presence of said server.

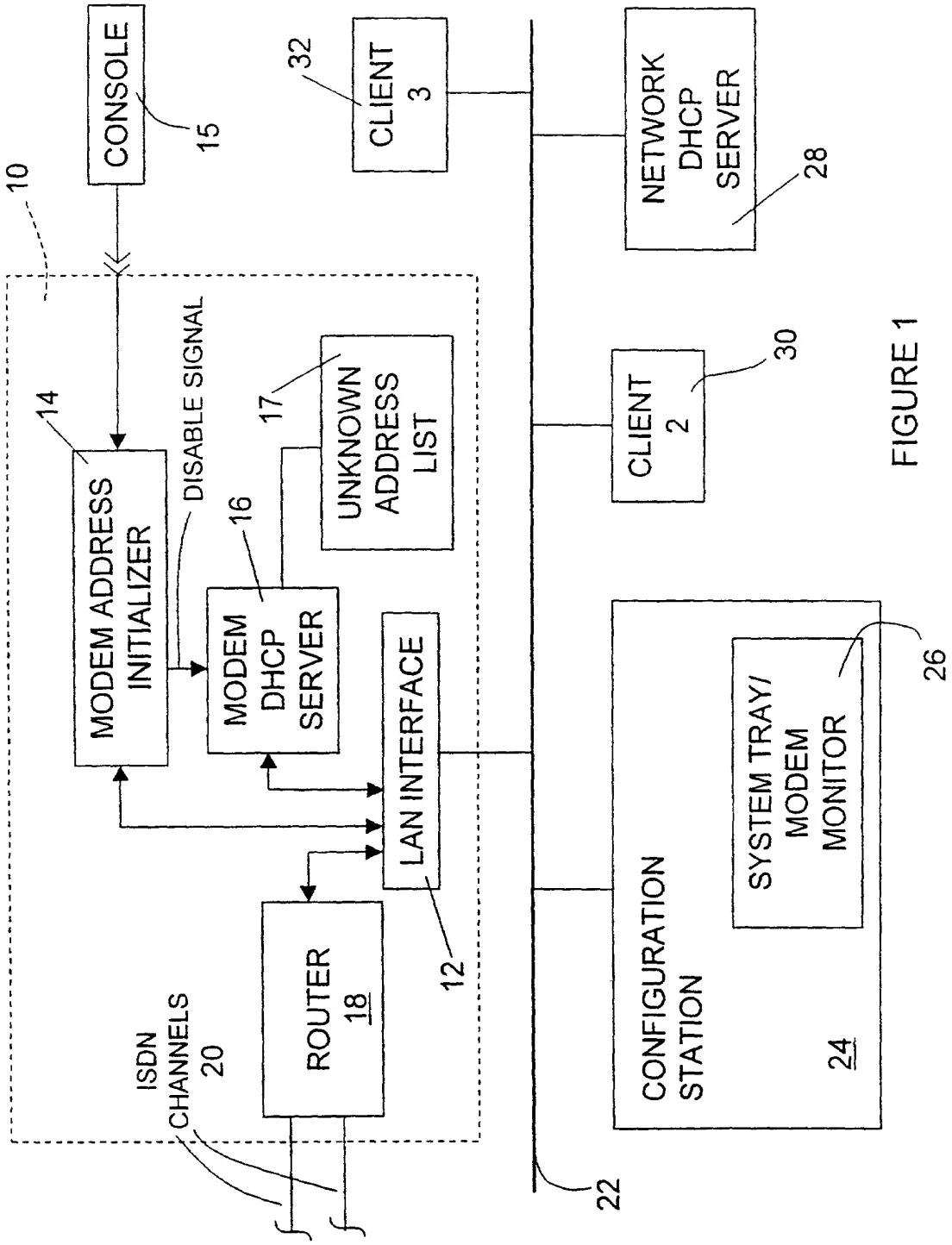
CONSOLE
15
10
32
CLIENT 3
NETWORK DHCP SERVER
28
MODEM ADDRESS INITIALIZER
14
DISABLE SIGNAL
17
UNKNOWN ADDRESS LIST
16
MODEM DHCP SERVER
CLIENT 2
30
LAN INTERFACE
12
ROUTER 18
ISDN CHANNELS 20
CONFIGURATION STATION
24
SYSTEM TRAY/ MODEM MONITOR
26
22

FIGURE 1

Declaration and Power of Attorney for Patent Application

Déclaration et Pouvoir pour Demande de Brevet
French Language Declaration

En tant qu'inventeur ci-après désigné, je déclare par la présente que:

Mon domicile, mon adresse postale et ma nationalité sont tels que figurant ci-dessous à côté de mon nom.

Je crois être le premier inventeur original et unique (si un seul nom est mentionné ci-dessous), ou l'un des premiers co-inventeurs originaux (si plusieurs noms sont mentionnés ci-dessous) de l'objet revendiqué, pour lequel une demande de brevet a été déposée concernant l'invention intitulée

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

DIGITAL NETWORK MODEM WITH AN INTEGRATED DHCP SERVER.

et dont le mémoire descriptif est ci-joint à moins que la case suivante n'ait été cochée:

☐ a été déposée le _____ sous le numéro de demande des États-Unis ou le numéro de demande internationale PCT _____ et modifiée le _____ (le cas échéant).

Je déclare par la présente avoir révisé et compris le contenu du mémoire descriptif ci-dessus mentionné, incluant les revendications, telles que modifiées par toute modification ci-dessus mentionnée.

Je reconnais devoir divulguer toute information pertinente à la brevetabilité, tel que défini dans le Titre 37, §1.56 du Code fédéral des réglementations.

Je revendique par la présente la priorité étrangère, en vertu du Titre 35, §119(a)-(d) ou §365(b) du Code des États-Unis, sur toute demande étrangère de brevet ou certificat d'inventeur ou, en vertu du Titre 35, §365(a) du même Code, sur toute demande internationale PCT désignant au moins un pays autre que les États-Unis et figurant ci-dessous et, en cochant la case, j'ai aussi indiqué ci-dessous toute demande étrangère de brevet, tout certificat d'inventeur ou toute demande internationale PCT

the specification of which is attached hereto unless the following box is checked:

☒ was filed on April 27, 2001 as United States Application Number 09/830,475 and/or PCT International Application Number PCT/CA99/01014 filed October 29, 1999 and was amended on January 4, 2001 (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations., §1.56.

I hereby claim foreign priority under Title 35, United States Code, §119(a)-(d) or §365 (b) of any foreign application(s) for patent or inventor's certificate, or §365(a) of any PCT International application which designated at least one country other than the United States, listed below, and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application

French Language Declaration

ayant une date de dépôt précédant celle de la demande à propos de laquelle une priorité est revendiquée.

on which priority is claimed.

Prior foreign application(s)
Demande(s) de brevet antérieure(s)

Priority Not Claimed
Droit de priorité non revendiqué

2,252,207	CANADA	30 October 1998	☐
Number) (Numéro)	(Country) (Pays)	(Day/Month/Year Filed) (Jour/Mois/Année de dépôt)	
			☐
(Number) (Numéro)	(Country) (Pays)	(Day/Month/Year Filed) (Jour/Mois/Année de dépôt)	

Je revendique par la présente tout bénéfice, en vertu du Titre 35, §119(e) du Code des États-Unis, de toute demande de brevet provisoire effectuée aux États-Unis et figurant ci-dessous.

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

(Application No.)
(N° de demande)

(Filing Date)
(Date de dépôt)

Je revendique par la présente tout bénéfice, en vertu du Titre 35, §120 du Code des États-Unis, de toute demande de brevet effectuée aux États-Unis, ou en vertu du Titre 35, §365(c) du même Code, de toute demande internationale PCT désignant les États-Unis et figurant ci-dessous et, dans la mesure où l'objet de chacune des revendications de cette demande de brevet n'est pas divulgué dans la demande antérieure américaine ou internationale PCT, en vertu des dispositions du premier paragraphe du Titre 35, §112 du Code des États-Unis, je reconnais devoir divulguer toute information pertinente à la brevetabilité, tel que défini dans le Titre 37, §1.56 du Code fédéral des réglementations, dont j'ai pu disposer entre la date de dépôt de la demande antérieure et la date de dépôt de la demande nationale ou internationale PCT de la présente demande:

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s), or §365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)	(Status) (patented, pending, abandoned) (Statut) (breveté, en cours d'examen, abandonné)
(Application No.) (N° de demande)	(Filing Date) (Date de dépôt)	(Status) (patented, pending, abandoned) (Statut) (breveté, en cours d'examen, abandonné)

French Language Declaration

Je déclare que toute les déclarations faites dans la présente sont à ma connaissance, véridiques et que toutes les déclarations faites à partir de renseignements ou de suppositions sont tenues pour véridiques; et de plus, que toutes ces déclarations ont été faites en sachant que toute fausse déclaration volontaire ou son équivalent est passible d'une amende ou d'une peine d'emprisonnement, ou des deux, en vertu de la Section 1001 du Titre 18 du Code des États-Unis, et que de telles déclarations volontairement fausses risquent de compromettre la validité de la demande de brevet ou du brevet délivré à partir de celle-ci.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

POUVOIR: En tant qu'inventeur désigné, Je nomme par la présente l'(les) avocat(s) et/ou agent(s) suivant(s), avec plein pouvoir de révocation et de substitution, chargés de poursuivre cette demande et de traiter toute affaire s'y rapportant avec l'Office des brevets et des marques: *(mentionner le nom et le numéro d'enregistrement).*

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following agents and/or attorneys, with full power of substitution, association, and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: *(list name and registration number)*

STEVEN B. KELBER, Reg. No. 30,073; MARC R. LABGOLD, Ph.D., Reg. No. 34,651; PAUL C. KIMBALL, Reg. No 34,641; LAURA A. DONELLY, Reg. No. 38,435; WILBURN L. CHESSER, reg. No. 41,668; SCOTT D. EADS, reg. No. 41,726; JAMES M. HEINTZ, Reg. No. 41,828; LAURA D. NAMMO, Reg. No. 42,024; AMY L. MILLER, Reg. No. 43,804; CHRISTOPHER W. RAIMUND, Reg. No. 47,258 and
JAMES ANGLEHART, Registration No. 38,796, MAX R. WOOD (Reg. No. 40,388), ROBERT MITCHELL, Registration No. 25,007, GUY HOULE, Registration No. 24,971, PAUL MARCOUX, Registration No. 24,990, KEVIN P. MURPHY, Registration No. 26,674; ROBERT CARRIER, Registration No. 30,726; MICHEL J. SOFIA; Registration No. 37,017; FRANCE CÔTÉ, Registration No. 37,037; and CHRISTIAN CAWTHORN, Registratin No. 47,352.

Please send all correspondence and direct all telephone calls to: / Veuillez adresser toute correspondance et tout appel téléphonique à:

PIPER MARBURY RUDNICK & WOLFE, LLP
1200 Nineteenth Street, NW
Washington, DC 20036-2412
USA

Full name of sole or first inventor (Nom complet de l'unique ou premier inventeur)	Citizenship (Nationalité)	Date (dd/mm/yyyy) (jj/mm/aaaa)
Gilbert MOINEAU	Canadian	20/09/2001
Residence and Post Office address (Domicile et adresse postale) 3255 Dalbé-Viau Street, Lachine, Quebec, CANADA H8T 3N3	Inventor's signature (signature de l'inventeur)	